Theater High Altitude Area Defense (THAAD) System



MISSION

Provide theater-wide area defense of tactical ballistic missile (TBM) threats, including weapons of mass destruction, operating in the endo- and exo-atmosphere and directed against military forces and strategic geopolitical assets.

DESCRIPTION AND SPECIFICATIONS

The Theater High Altitude Area Defense (THAAD) system is a theater missile defense (TMD) weapon system designed to intercept short- and medium-range missile threats that will employ increasingly sophisticated warhead technologies. The THAAD system will augment existing and other planned TMD capabilities by engaging threat missiles at higher altitudes and at longer ranges. This intercept capability negates the use of weapons of mass destruction. THAAD's hit-to-kill guidance approach provides a high degree of lethality compared to existing systems with fragmentation warheads.

The THAAD system consists of missiles; launchers; battle management/command, control, communication, computers, and intelligence (BM/C4I) elements; radars; and support equipment. The missile is a hypervelocity, single-stage, solid propellant booster with a unique endo-/exo-atmospheric kill vehicle (KV). The hit-to-kill technology KV, designed to destroy threat warheads, guides to the target using an infrared homing seeker. The launcher uses the Army standard Palletized Loading System (PLS) 16-ton truck with a capacity of at least eight missile rounds on a missile pack. The High Mobility Multipurpose Wheeled Vehicle (HMMWV)-based BM/C4I centers will coordinate with the theater air defense command and control system and will control both the engagement and force operations for THAAD.

The BM/C4I will provide automated acquisition and identification of TBM threats, process and disseminate track data, assign weapons, monitor engagements, and guide sensor operations. The THAAD X-band phased-array radar acquires the target at long ranges, tracks it, and provides in-flight updates to the THAAD interceptor prior to intercept. The radar also performs kill assessment to support the decision to commit additional interceptors or to cue lower tier systems such as the Patriot system. The THAAD system will support passive defense and attack operations by providing impact-point predictions and launch point estimations. The THAAD system will be fully transportable by C141/C5/C17 military aircraft. Once in theater, the system will use Army standard movers to be highly

mobile on highways and unimproved roads. These system capabilities will allow THAAD to be rapidly deployed to any theater on short notice.

FOREIGN COUNTERPART

THAAD System: France and Italy: SAAM, SAMP/N, SAMP/T. **THAAD Radar**: Russia: Hen House, Dog House, and Try Adds radars; Germany: MSAM.

FOREIGN MILITARY SALES

None

PROGRAM STATUS

The program is preparing for the engineering and manufacturing development phase. Eleven flight tests have been completed with two successful intercepts. The user operational evaluation system battalion in Ft. Bliss, TX, supports flight testing and soldier training.

PROJECTED ACTIVITIES

3QFY00 Milestone II decision. **3QFY02** System critical design review.

PRIME CONTRACTORS

THAAD System: Lockheed Martin (Sunnyvale, CA) THAAD Radar: Raytheon (Bedford, MA) (As of FY98, Raytheon has been a prime sub to Lockheed Martin.)



* See appendix for list of subcontractors

